

CLAIMS

What is claimed is:

1. A process comprising:
dicing a semiconductor wafer before forming devices on the semiconductor wafer, the dicing forming trenches in the semiconductor wafer;
back-grinding the semiconductor wafer after forming the devices on the semiconductor wafer.
2. The process of claim 1 further comprising forming an oxide in the trenches formed by dicing the semiconductor wafer.
3. The process of claim 2 further comprising scribing the trenches.
4. The process of claim 3 further comprising removing the oxide after the devices are formed on the semiconductor wafer.
5. The process of claim 1 wherein the dicing is performed by one of a group of processes consisting of sawing, etching, and lasering.
6. The process of claim 5 wherein the trenches extend 90 to 150 microns from the surface of the semiconductor wafer.
7. The process of claim 4 wherein the scribing is performed by using a laser.

8. A method comprising:
- etching a plurality trenches in a surface of a semiconductor wafer between a plurality of die on the semiconductor wafer, the trenches extending between approximately 90 and 150 microns from the surface of the semiconductor wafer;
- back-grinding the opposite surface of the semiconductor to the bottom of the trenches.
9. The method of claim 8 wherein the plurality of trenches are etched into the surface of the semiconductor wafer before devices are completely formed on the plurality of die.
10. The method of claim 9 further comprising depositing oxide in the plurality of trenches.
11. The process of claim 10 further comprising planarizing the oxide.
12. The process of claim 11 further comprising removing the oxide by using a laser.
13. A method comprising:
- singulating a plurality of die on a semiconductor wafer by creating a

plurality of trenches extending approximately 90 to 150 microns from the surface of the semiconductor wafer before forming devices on the plurality of die;

back-grinding the semiconductor wafer to the bottom of the plurality of trenches;

forming oxide in the plurality of trenches;

planarizing the oxide;

removing the oxide.

14. The method of claim 13 further comprising scribing the plurality of trenches.